

## Patent Claims

1. A device for configuring an at least partially automated or motorized microscope (1), whereby the microscope (1) comprises at least one configurable subassembly having several positions for different elements, and whereby a computer (17) with a display (21) and at least one input means is associated with the microscope, characterized in that a database is implemented in the computer (17) and all possible and available elements for the at least one configurable subassembly are stored in said database.
2. The device according to claim 1, characterized in that the at least one configurable subassembly is a motorized tube (50), or an incident light axis, or an objective nosepiece (36), or a Z-drive for setting the focus, or an X/Y-stage (41), or at least one lamp (14), or a condenser (24), or a plurality of control knobs (30).
3. The device according to claim 1, characterized in that all of the subassemblies of the microscope (1) are automated.
4. The device according to claim 3, characterized in that the configurable subassembly comprises a motorized tube (50), and an incident light axis, and an objective nosepiece (36), and a Z-drive for setting the focus, and an X/Y-stage (41), and at least one lamp (14), and a condenser (24), and a plurality of control knobs (30).
5. The device according to claim 1, characterized in that several user interfaces can be depicted on the display (21) and in that the various user interfaces all consist of at least three areas (61, 62, 63).
6. The device according to claim 5, characterized in that a first area (61) of the user interface depicts a selection of at least three modules (61a, 61b, 61c), the first module (61a) comprising the configuration of the microscope (1), the second

module (61b) comprising the fine tuning and the third module (61c) comprising the operation of the microscope (1).

7. The device according to claim 5, characterized in that a second area (62) of the user interface comprises a tree (62a) that shows the user the various possibilities of the module from the first area (61) that has been selected in each case.
8. The device according to claim 5, characterized in that a third area (63) of the user interface allows the user to make a precise selection of the sub-module selected in the second area (62).
9. The device according to claim 8, characterized in that the subassembly to be configured and the elements that can be selected for this module can be shown to the user in the third area (63) of the user interface on the display (21) of the computer (17).
10. The device according to claim 1, characterized in that, after the configuration has been completed, a process vector can be calculated with the computer (17) and stored in a storage unit (47) in the stand (2) of the microscope.
11. The device according to claim 10, characterized in that the stand (2) of the microscope (1) has a display (26) integrated into it on which the methods determined by the process vector and based on the configuration can be shown to the user and in that a warning can be given to the user in case of an incorrect combination of optical elements.
12. A method for configuring an at least partially automated or motorized microscope (1), whereby the microscope (1) comprises at least one configurable subassembly having several positions for different elements, and whereby a computer (17) with a display (21) and at least one input means is associated with the microscope, characterized by the following steps:

- a user interface is depicted on the display (21) of the computer and a first module (61a) is selected for the configuration of the microscope;
  - all of the configurable subassemblies are selected one after the other and the elements belonging to the selected subassembly are determined;
  - the fine tuning of the configured subassemblies is carried out;
  - the measuring procedure with the microscope is started.
13. The method according to claim 12, characterized in that the at least one configurable subassembly is a motorized tube (50), or an incident light axis, or an objective nosepiece (36), or a Z-drive for setting the focus, or an X/Y-stage (41), or at least one lamp (14), or a condenser (24), or a plurality of control knobs (30).
14. The method according to claim 12, characterized in that all of the subassemblies of the microscope (1) are automated.
15. The method according to claim 14, characterized in that the configurable subassembly comprises a motorized tube (50), and an incident light axis, and an objective nosepiece (36), and a Z-drive for setting the focus, and an X/Y-stage (41), and at least one lamp (14), and a condenser (24), and a plurality of control knobs (30).
16. The method according to claim 12, characterized in that several user interfaces can be depicted on the display (21) and in that the various user interfaces all consist of at least three areas (61, 62, 63).
17. The method according to claim 16, characterized in that a first area (61) of the user interface comprises a selection of at least three modules (61a, 61b, 61c), the first module (61a) comprising the configuration of the microscope (1), the second module (61b) comprising the fine tuning and the third module (61c) comprising the operation of the microscope (1).

18. The method according to claim 16, characterized in that a second area (62) of the user interface comprises a tree (62a) that shows the user the various possibilities of the module from the first area (61) that has been selected in each case.
19. The method according to claim 16, characterized in that a third area (63) of the user interface allows the user to make a precise selection of the sub-module selected in the second area (62).
20. The method according to claim 19, characterized in that the subassembly to be configured and the elements that can be selected for this module can be shown to the user in the third area (63) of the user interface on the display (21) of the computer (17).
21. The method according to claim 12, characterized in that after the configuration has been completed, a process vector is calculated with the computer (17) and stored in a storage unit (47) in the stand (2) of the microscope.
22. The method according to claim 21, characterized in that the stand (2) of the microscope (1) has a display (26) integrated into it on which the methods determined by the process vector and the methods based on the configuration can be shown to the user and in that a warning can be given to the user in case of an incorrect combination of optical elements.